

## Notes on linyphiid spiders from Afghanistan (Araneae, Linyphiidae)

Andrei V. TANASEVITCH

Centre for Forest Ecology and Production Russian Academy of Sciences,  
Profsoyuznaya Str. 84/32, Moscow 117997, Russia. E-mail: and-tan@mail.ru

### Notes on linyphiid spiders from Afghanistan (Araneae, Linyphiidae). -

A small collection of linyphiid spiders from Afghanistan contains eleven species, ten of which are new to the Afghan fauna, and one species, i.e. *Megalephyphantes kandahar* sp. n., is new to science. A new combination is established: *Lepthyphantes afghanus* Denis, 1958 = *Mughiphantes afghanus* (Denis, 1958) comb. n. All records of *Arachosinella strepens* Denis, 1958 from Kirghizia, Kazakhstan and Mongolia actually refer to *A. oeroe-gensis* Wunderlich, 1995. The distribution of *A. strepens* is restricted to Afghanistan.

**Keywords:** Taxonomy - new species - new combination - new records.

### INTRODUCTION

Only six linyphiid species have hitherto been known from Afghanistan, i.e. *Arachosinella strepens* Denis, 1958, *Erigone atra* Blackwall, 1833, *Lepthyphantes afghanus* Denis, 1958, *Tenuiphantes tenuis* (Blackwall, 1852) (Denis, 1958), *Mughiphantes hindukuschensis* (Miller & Buchar, 1972) (Miller & Buchar, 1972) and *Megalephyphantes kuhitangensis* (Tanasevitch, 1989) (for the latter species see Tanasevitch, 2009). A small collection of spiders from Afghanistan, stored in the Muséum d'histoire naturelle, Geneva, allowed to replenish the list of Afghan linyphiids with 10 species, one of which is new to science.

### MATERIAL AND METHODS

This paper is based on collections of A. Senglet and J. Klapperich from Afghanistan, stored in the Muséum d'histoire naturelle, Geneva, and on available records in the literature. Spider material in the Zoological Museum of the Moscow State University, Moscow was used for comparison.

The terminology of genitalic structures in *Megalephyphantes* Wunderlich, 1994 follows that of Saaristo & Tanasevitch (1996). In the description, chaetotaxy is given in the following formula: TII: 2-1-1-0, which means that tibia I has two dorsal spines, one pro-, one retrolateral spine, and no ventral spine (the apical spines are disregarded). The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given in mm. Scale lines in the figures are 0.1 mm.

Abbreviation used in the text and figures: DPS - distal part of scape, EP - embolus proper, Fe - femur, Mt - metatarsus, PMP - posterior median plate, P - pro-scape, Ti - tibia, Tml - position of the tri-cho-bothri-um on tibia I, ZMMU - Zoological Museum of the Moscow State University. Senglet's collection numbers are given in square brackets. Unless otherwise stated, all specimens are deposited in the Muséum d'histoire naturelle, Geneva.

## RESULTS

### *Arachosinella strepens* Denis, 1958

RECORDS FROM AFGHANISTAN: Bamian: Puistagoli, Koh-i-Baba Mt. Ridge (Hindukush Mts system) (Denis, 1958).

REMARKS: This species is absent from the material examined. A study of the material kept at ZMMU (see below) showed that all records of *A. strepens* from Kirghizia (Tanasevitch, 1989), Eastern Kazakhstan (Eskov & Marusik, 1995) and Mongolia (Marusik *et al.*, 2000) actually refer to *A. oeroegensis* Wunderlich, 1995, originally described from Mongolia (Wunderlich, 1995). The known distribution of *A. strepens* seems to be restricted to Afghanistan.

COMPARATIVE MATERIAL EXAMINED: 4 ♂, 3 ♀ (ZMMU), Eastern KAZAKHSTAN, Zaysan District, Saur Mt. Ridge, Karaungur River Valley (Kenderlyk River basin), *Populus* forest, 18-22.VI.1990, leg. K. Eskov. - 1 ♂ (ZMMU), RUSSIA, Tuva Republic, near Ersin, flood-plain of Tes-Khem River, 1000 m a.s.l., 14.VIII.1989, leg. D. Logunov. - 1 ♂ (ZMMU), MONGOLIA, Suhbaatar Aimak, Tumentsogt Somon, leg. V. Ovtsharenko, 10.VIII.1985. - 3 ♂, 3 ♀ (ZMMU), near Shamor, bank of dead channel of Orkhon River, 17.VII.1990, leg. E. Veselova.

### *Agyneta fuscipalpa* (C.L. Koch, 1836)

MATERIAL: AFGHANISTAN: 2 ♂, 1 ♀ [7568], Vardak, NNE of Ghazni (33°45'N, 68°34'E), 12.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

### *Araeoncus caucasicus* Tanasevitch, 1987

MATERIAL: AFGHANISTAN: 2 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

### *Dactylopisthes digiticeps* (Simon, 1881)

MATERIAL: AFGHANISTAN: 1 ♂, 3 ♀, Kandahar, 950 m. a.s.l., 12.I.1953, leg. J. Klapperich. - 1 ♀, Kandahar-Kuna, 950 m. a.s.l., 17.II.1953, leg. J. Klapperich. - 2 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. - 1 ♀ [7561], Kandahar, E of Kandahar (31°37'N, 65°53'E), 1.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

### *Erigone atra* Blackwall, 1833

RECORDS FROM AFGHANISTAN: Bamian: Panjab, Koh-i-Baba Mt. Ridge (Hindukush Mts system) (Denis, 1958).

REMARKS: This species is absent from the material examined.

*Erigone dentipalpis* (Wider, 1834)

MATERIAL: AFGHANISTAN: 1 ♂, Kandahar-Kuna, 950 m. a.s.l., 17.II.1953, leg. J. Klapperich. – 1 ♂, 4 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. – 1 ♀ [7568], Vardak, NNE of Ghazni (33°45'N, 68°34'E), 12.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

*Frontinellina frutetorum* (C.L. Koch, 1834)

MATERIAL: AFGHANISTAN: 1 ♀ [7563], Kabul, E of Kabul (34°34'N, 69°29'E), 4.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

*Megalephyphantes kandahar* sp. n.

Figs 1-6

MATERIAL: AFGHANISTAN: ♂ holotype, Kandahar, E of Kandahar [7561] (31°37'N, 65°53'E), 1.VIII.1975, leg. A. Senglet. – Paratypes: 1 ♂, 2 ♀, same locality, together with holotype.

ETYMOLOGY: The specific name, a noun, refers to the Kandahar Province of Afghanistan, the terra typica of the new species.

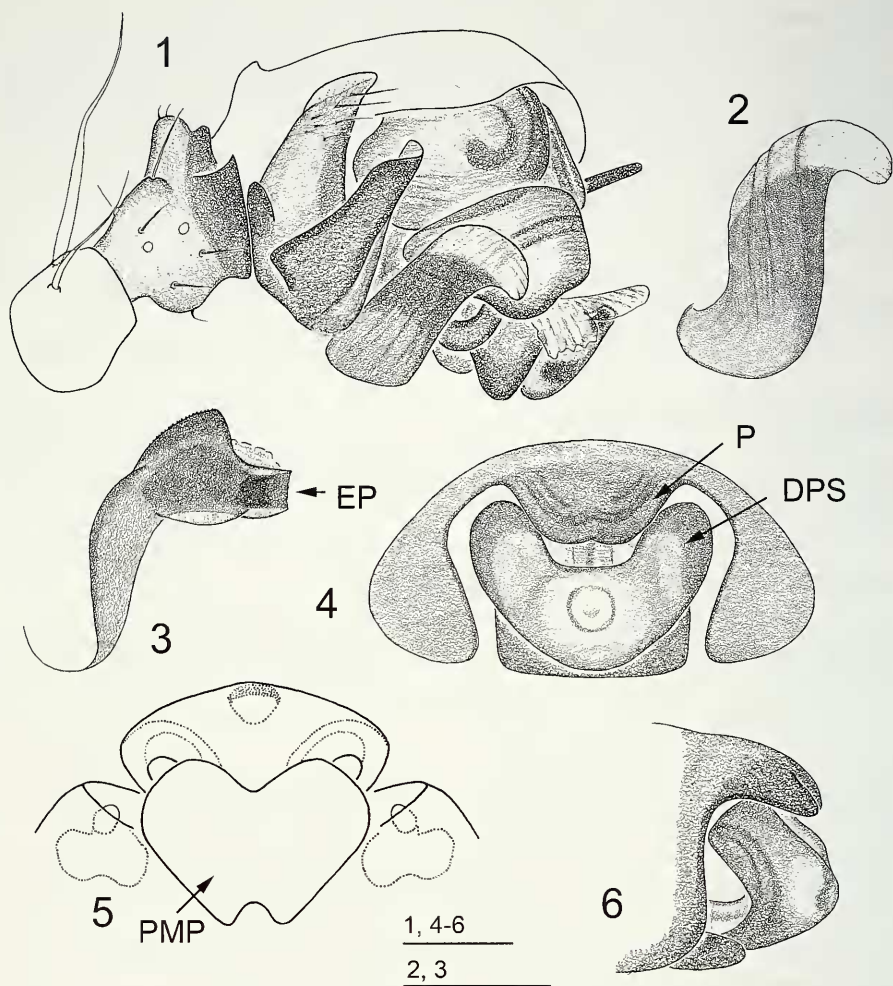
DIAGNOSIS: The species is characterised by the shape of the palpal tibia and the lamella characteristica in males, and by the shape of the posterior median plate in females.

DESCRIPTION: Male. Total length 3.05. Carapace 1.25 long, 0.90 wide, pale brown, almost yellow, unmodified. Chelicerae 0.50 long, stridulatory area distinct. Legs pale yellow, tibia with a grey median band, distal part of segments darkened. Leg I 8.40 long (2.20+0.30+2.30+2.20+1.40), IV 7.30 long (2.00+0.25+1.80+2.10+1.15). Chaetotaxy. Fel: 0-1-0-0, II-IV: 0-0-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-1-0-0; MtI-IV: 1-0-0-0. TmI 0.13. Metatarsi IV without trichobothrium. Palp (Figs 1-3): Patella with two special setae. Tibia with a rounded dorsal process. Cymbium with a small posterodorsal outgrowth. Paracymbium highly sclerotized, with a tooth in proximal part. Lamella characteristica S-shaped, well-sclerotized in middle part, almost transparent distally. Embolus seahorse-like, with a serrate surface above embolus proper. Abdomen 2.00 long, 1.30 wide, dorsally pale, sometimes white, with a pale grey median stripe flanked by paramedian spots connected to it with thin bands.

Female. Total length 3.00. Carapace 1.05 long, 0.80 wide. Chelicerae 0.55 long. Leg I 7.15 long (2.00+0.35+2.10+1.65+1.05), Fe IV 1.70 long. Fel: 0-1-0-0, II-IV: 0-0-0-0; TiI: 2-1-1-0, II-IV: 2-0-1-0; MtI-IV: 1-0-0-0. TmI 0.12. Abdomen 2.00 long, 1.20 wide. Epigyne (Figs 4-6): Proscape short and strongly sclerotized, distal part wide, V-shaped. Stretcher totally reduced. Posterior median plate darkened, with a hollow anteriorly and posteriorly.

VARIABILITY: The posterior median plates of both females are identical in shape.

TAXONOMIC REMARKS: The new species is very similar to *M. kuhitangensis* (Tanasevitch, 1989), but distinguishable by the presence of only one dorsal outgrowth on the male palpal tibia (two in *M. kuhitangensis*), by the rounded apex of the lamella



FIGS 1-6

*Megalephyphantes kandahar* sp. n., ♂ & ♀ paratypes. (1) Right palp, retrolateral view. (2) Lamella characteristica. (3) Embolus. (4-6) Epigyne, ventral, dorsal and lateral view, respectively.

characteristica (bifid in *M. kuhitangensis*), as well as by the shape of the posterior median plate.

DISTRIBUTION: The species is known from the type locality only.

***Megalephyphantes kuhitangensis* (Tanasevitch, 1989)**

REMARKS: This species was described from females collected in Turkmenistan (Tanasevitch, 1989). The male sex has just been described from Kandahar, Afghanistan (Tanasevitch, 2009).

RECORDS FROM AFGHANISTAN: Kandahar: Kandahar (Tanasevitch, 2009).

*Megalephyphantes turkestanicus* (Tanasevitch, 1989)

MATERIAL: AFGHANISTAN: 6 ♂, 8 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. – 1 ♀ [7567], E of Kandahar (31°37'N, 65°53'E), 1.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

*Mesasigone mira* Tanasevitch, 1989

MATERIAL: AFGHANISTAN: 3 ♂, 5 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. – 2 ♂, 5 ♀ [7561], E of Kandahar (31°37'N, 65°53'E), 1.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

*Microlinyphia pusilla* (Sundevall, 1830)

MATERIAL: AFGHANISTAN: 1 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. – 1 ♀ [7561], Kandahar, E of Kandahar (31°37'N, 65°53'E), 1.VIII.1975, leg. A. Senglet. – 1 ♀ [7568], Vardak, NNE of Ghazni (33°45'N, 68°34'E), 12.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

*Mughiphantes afghanus* (Denis, 1958) comb. n.

RECORDS FROM AFGHANISTAN: Herat: Zarmast, 2500 m a.s.l. (Denis, 1958).

REMARKS: This species is absent from the material examined. Based on the original description and figure, *Lepthyphantes afghanus* clearly belongs to the genus *Mughiphantes* Saaristo & Tanasevitch, 1999.

*Mughiphantes hindukuschensis* (Miller & Buchar, 1972)

RECORDS FROM AFGHANISTAN: Hindukush, Tiritsch-Taal, 4100 m a.s.l. (Miller & Buchar, 1972).

REMARKS: This species is absent from the material examined.

*Prinerigone vagans* (Audouin, 1826)

MATERIAL: AFGHANISTAN: 2 ♂, 4 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. – 1 ♂, 1 ♀ [7561], E of Kandahar (31°37'N, 65°53'E), 1.VIII.1975, leg. A. Senglet.

REMARKS: This species is here reported for the first time for the Afghan fauna.

*Tenuiphantes tenuis* (Blackwall, 1852)

MATERIAL: AFGHANISTAN: 1 ♂, 2 ♀ [7560], Kandahar, W of Kandahar (31°37'N, 65°36'E), 31.VII.1975, leg. A. Senglet. – 1 ♀ [7567], Kabul, Golbagh (34°26'N, 69°07'E), 11.VIII.1975, leg. A. Senglet.

RECORDS FROM AFGHANISTAN: Laghman (given as Paghman in Denis, 1958).

## ACKNOWLEDGEMENTS

I am most grateful to Antoine Senglet (Vich, Switzerland) and the late J. Klapperich (Bonn, Germany) on whose material the present study is based, as well as to Kirill Mikhailov (Moscow, Russia) for comparative material from the ZMMU. Special thanks to Peter J. Schwendinger (Geneva, Switzerland) for checking the manuscript and for the opportunity to work on the spider collections of the Muséum d'histoire naturelle, Geneva, as well as to Christo Deltchev (Sofia, Bulgaria) for helpful comments. This study was supported in part by the Russian Foundation for Basic Research, Projects # 09-04-01365-a and # 08-04-92230-a.

## REFERENCES

- DENIS, J. 1958. Araignées (Araneidea) de l'Afghanistan. I. *Videnskabelige Meddelelser Dansk Naturhistorisk Forening* 120: 81-120.
- ESKOV, K. Y. & MARUSIK, Y. M. 1995. On the spiders from Saur Mt. range, eastern Kazakhstan (Arachnida: Araneae). *Beiträge zur Araneologie* 4: 55-94.
- MARUSIK, Y. M., LOGUNOV, D. V. & KOPONEN, S. 2000. Spiders of Tuva, south Siberia. *Institute for Biological Problems of the North, Magadan*, 253 pp.
- MILLER, F. & BUCHAR, J. 1972. Einige neue Spinnenarten (Araneae) aus dem Hindukusch. *Acta Universitatis Carolinae (Biol.)* 1970: 383-398.
- SAARISTO, M. I. & TANASEVITCH, A. V. 1996. Redelimitation of the subfamily Micronetinae Hull, 1920 and the genus *Leptyphantes* Menge, 1866 with descriptions of some new genera. *Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck* 83: 163-186.
- TANASEVITCH, A. V. 1989. The linyphiid spiders of Middle Asia (Arachnida: Araneae: Linyphiidae). *Senckenbergiana biologica* 69 (1/3): 83-176.
- TANASEVITCH, A. V. 2009. The linyphiid spiders of Iran (Arachnida, Araneae, Linyphiidae). *Revue suisse de Zoologie* 116 (3-4): 379-420.
- WUNDERLICH, J. 1995. Linyphiidae aus der Mongolei (Arachnida: Araneae). *Beiträge zur Araneologie* 4: 479-529.